

Drug resistant Streptococcus pneumoniae (DRSP)

What is DRSP?

DRSP stands for drug resistant *Streptococcus pneumoniae*. It is a bacterium that has developed a resistance to at least one drug that is commonly used for pneumococcal infections. The antibiotic that DRSP is most commonly resistant to is penicillin, but DRSP may also be resistant to other antibiotics as well, including erythromycin, trimethoprim/sulfamethoxazole, vancomycin, tetracycline, chloramphenicol, and ofloxacin.

What is the reservoir for DRSP?

DRSP can affect people in two different ways--colonization or infection. When a person carries DRSP as part of their body's normally present bacteria (also known as their normal flora), the person is said to be **colonized**. If a person has an infection that is caused by DRSP, the person is said to be **infected**.

S. pneumoniae infections are among the leading causes worldwide of illness and death for young children, persons with underlying debilitating medical conditions, and the elderly. Each year in the United States, pneumococcal disease is estimated to account for 3,000 cases of meningitis (infection of the lining of the brain and spinal cord), 50,000 cases of bacteremia (infection of the blood), and 7,000,000 cases of otitis media (infection of the middle ear).

How does DRSP spread from person-to-person?

The most common ways DRSP is spread are through large respiratory droplets (i.e., coughing or sneezing) or direct contact from person-to-person. People who carry *S. pneumoniae* as part of their normal flora may spread the infection to others without ever feeling ill.

How can you stop DRSP spread from person-to-person?

The same methods that would prevent the spread of pneumococcal infections are effective in preventing the spread of DRSP. These include covering the mouth and nose while sneezing or coughing, regular handwashing and the detection and treatment of persons who carry *S. pneumoniae* bacteria as part of their normal flora.

There is a vaccine available that protects against the 23 most common serotypes of *S. pneumoniae*. The Advisory Committee on Immunization Practices (ACIP) recommends that the vaccine be administered to persons 2 years of age or older who have certain underlying medical conditions associated with increased risk for pneumococcal disease and its complications, and to all persons greater than or equal to 65 years of age.

Is DRSP more of a concern than other infections?

Yes and no. DRSP infections are no more virulent than other pneumococcal infections. However, pneumococcal infections can be extremely serious and all infections are of concern to health care workers and patients. DRSP is of particular importance because infections caused by DRSP may be very difficult to treat with the antibiotics that are currently available.

How can you prevent the spread of DRSP?

The number of all pneumococcal infections would be likely to decrease if more people were vaccinated against the disease. Talk with your personal doctor to find out if you could benefit from vaccination against pneumococcal disease.

The problem of drug resistance would be likely to decrease if antibiotics were used more carefully. If you are prescribed an antibiotic for a pneumococcal infection (or any other infection), be sure and take the entire prescription as directed. (If the medicine is not agreeing with you, contact your health care provider and they may be able to prescribe another antibiotic.) NEVER give an antibiotic to anyone who it was not prescribed for and never save 'leftover' antibiotic for future use. See the Utah Department of Health's fact sheet on Antibiotics for further information about proper antibiotic use.

Where can I get more information?

- Your personal doctor.
- Your local health department listed in your telephone directory.
- The Utah Department of Health, Bureau of Epidemiology (801) 538-6191 or the Immunization Program (801) 538-9450.

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